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Subject:

Revised First Work Plan for Characterization and Off-Site Disposal of South and East  
Crushed Concrete Piles and West Pad  
Trinity Superfund Site  
Cleveland, Ohio

Dear Mr. Fredle:

ARCADIS, on behalf of Standex International Corporation, is submitting three copies of the revised *First Work Plan for Characterization and Off-Site Disposal of South and East Crushed Concrete Piles and West Pad* (FWP), as specified in Section VIII of the Administrative Settlement Agreement and Order on Consent for Removal Action (Docket No. V-W-08-C-902) (AOC). This revised FWP incorporates the information contained in our response to comments letter, dated July 9, 2008, as well as follow-up discussions with the United States Environmental Protection Agency (USEPA).

One additional minor edit we had not discussed previously was made to Section 1.4, changing SW-846 method 3540C to 3500B (Organic Extraction and Sample Preparation). The 3540C method provided in the original FWP, as provided by the laboratory, had intended to cite 3500B as the referenced method series. This change will not affect data quality or detection limits and will increase our ability to address matrix challenges presented by the project by not limiting us to soxhlet extraction, which was the original intent.

Further, additional landfill parameter sampling for waste disposal characterization for the West Pad concrete may be modified based on recent observations/discussions in the field with the USEPA.

Based on our discussions, it is our understanding, in accordance with the AOC, that the USEPA will provide written approval of the FWP.

Date:

July 17, 2008

Contact:

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Our ref:

B0083322

Imagine the result

Please feel free to call me at 330.697.2244 with any questions or comments.

Sincerely,

ARCADIS

A handwritten signature in black ink, appearing to read 'Ron R. Clark', written over a light gray circular background.

Ron R. Clark, P.E., CP  
Principal Engineer

Copies:

Ms. Stacey Constas, Standex International Corporation  
Mr. William B. Popham, ARCADIS  
Mr. Joseph Molina III, P.E., ARCADIS  
Mr. Thomas Hite, ARCADIS

**Standex International Corporation**

**First Work Plan for  
Characterization and Off-Site  
Disposal of South and East  
Crushed Concrete Piles and West  
Pad**

Trinity Superfund Site  
Cleveland, Ohio

June 2008  
Revised July 2008

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**Acronyms**

Trinity Superfund Site

|         |   |
|---------|---|
| ANSI    | American National Standards Institute   |
| AOC     | Administrative Settlement Agreement and Order on Consent for Removal Action   |
| bgs     | below ground surface  |
| CFR     | Code of Federal Regulation  |
| DOT     | Department of Transportation  |
| FWP     | <i>First Work Plan for Characterization and Off-Site Disposal of South and East Crushed Concrete Piles and West Pad</i> |
| HASP    | <i>Health and Safety Plan</i>   |
| mg/kg   | milligrams per kilogram   |
| PCB     | polychlorinated biphenyl  |
| PPE     | personal protective equipment   |
| ppm     | parts per million   |
| QA/QC   | quality assurance/quality control   |
| SOP     | Standard Operating Procedure  |
| Standex | Standex International Corporation   |
| USEPA   | United States Environmental Protection Agency   |
| VAP     | Voluntary Action Program  |

## 1. Introduction

### 1.1 General

Standex International Corporation (Standex) has been named as a Potential Responsible Party for impacts observed at the Trinity Superfund Site located at 9203 Detroit Avenue in Cleveland, Cuyahoga County, Ohio (site) (Figure 1). As a result, Standex entered into an Administrative Settlement Agreement and Order on Consent for Removal Action (AOC) with the United States Environmental Protection Agency (USEPA) on June 4, 2008 to address polychlorinated biphenyl (PCB) impacts at the site.

This *First Work Plan for Characterization and Off-Site Disposal of South and East Crushed Concrete Piles and West Pad* (FWP) has been prepared by ARCADIS, on behalf of Standex, for the implementation of initial site activities as required by Section VIII of the AOC.

The site is located along the south side of Detroit Avenue in a mixed industrial and residential portion of the City of Cleveland. A residential apartment complex is situated adjacent and to the west of the site. An industrial manufacturing facility is located on the property situated adjacent to and to the east of the site. Norfolk Southern Railroad and Cuyahoga County Regional Transit Authority commuter rail lines are situated to the south of the site.

The site is trapezoidal in shape. The western third of the site contains a gravel area to the north and a concrete pad (the West Pad) to the south. The central third of the property contains a rubble pile (North Rubble Pile) to the north, a concrete pad in the middle (East Pad), a crushed concrete pile (South Crushed Concrete Pile), and several excavated areas containing crushed concrete to the south (Southeast Crushed Concrete Pit and Southern Boundary Excavation Area). The eastern third of the site contains a gravel area to the north and a crushed concrete pile (East Crushed Concrete Pile) to the south.

The objective of this project is to characterize and remediate PCB-impacted materials at the site to an end risk-based standard. In general, the overall project components are summarized below and identified on the attached Figure 2, which was adapted from HZW Environmental Consultants, LLC's Figure 1:

- Concrete slabs, which include the West Pad, East Pad, and South Pad.

- Crushed concrete and brick material in piles and pits, which include the North Rubble Pile (Pile 3), South Crushed Concrete Pile (Pile 1), East Crushed Concrete Pile (Pile 2), South Crushed Concrete Pit (Pit 1), and Southern Boundary Excavation Area (Pit 2).
- On-site soil beneath the existing concrete pads.

In accordance with Section VIII of the AOC, a total of two work plans shall be prepared and submitted to the USEPA for this project, which include this FWP, as well as the *Second Work Plan for Characterization and Off-Site Disposal of North Rubble Pile, Southeast Crushed Concrete Pit, Southern Boundary Excavation Area, East and South Pads, and Soil*. This FWP covers the characterization and removal of materials with PCB concentrations greater than 50 milligrams per kilogram (mg/kg or parts per million [ppm]) for the East and South Crushed Concrete Piles and the West Pad.

## **1.2 Background**

The following background information was taken from the AOC and the USEPA Report titled *Site Assessment Report for the Trinity Site Cleveland, Cuyahoga County, Ohio* (February 14, 2008).

The City of Cleveland initiated a Brownfield project at the site in 2005 with the purpose to provide a property that could be developed for commercial/industrial use. The City of Cleveland assessed the property, razed buildings, and removed tanks in preparation for site restoration. During the later stages of their assessment, it was determined that the demolition materials, as well as some soils on and near the site, were impacted with PCBs. Later assessments have indicated the presence or potential presence of mercury, heavy metals, chlorinated solvents, and other contaminants. In 2007, the City of Cleveland requested assistance from the USEPA that resulted in an on-site and off-site assessment and a limited remediation program.

The City of Cleveland contacted the USEPA in May 2007 and requested assistance regarding PCBs that were found by the City of Cleveland during demolition activities. The USEPA conducted site assessment activities at the site from May 2007 through November 2007. Based on the USEPA's site assessment activities, the following levels of PCBs were found at the site:

- on-site soils – 0.038 to 5,700 mg/kg
- off-site residential soils – 0.12 to 11 mg/kg
- on-site sub-slab soils – 0.067 to 77 mg/kg
- concrete cores – 0.046 to 10,000 mg/kg
- on-site sewers and drains – 0.13 to 770 mg/kg
- on-site crushed concrete – 0.59 to 110 mg/kg

Additional details regarding the site's use and history are provided in the AOC.

### **1.3 Purpose and Objectives**

This FWP outlines the procedures for the characterization and proper off-site disposal of materials containing PCB concentrations above 50 ppm in the East and South Crushed Concrete Piles and the West Pad. The USEPA has estimated that the total volume of materials in the South Crushed Concrete Pile is approximately 4,860 cubic yards and in the East Crushed Concrete Pile is approximately 3,150 cubic yards, and the total area of concrete for the West Pad is approximately 33,825 square feet.

This FWP includes the following:

- Although the East Crushed Concrete Pile has been previously characterized by the USEPA, this FWP describes procedures to collect six additional confirmation samples of representative composited pile materials to confirm PCB concentrations and for waste disposal characterization and off-site disposal acceptance.
- Procedures for the characterization of the South Crushed Concrete Pile using a seven-point composite sampling technique on windrowed piles. The current pile will be regraded into a windrow, and the windrow will be visually marked into 200- to 250-cubic yard segments.
- Additional characterization of the West Pad to better define PCB concentrations above 50 ppm.

- A Site Security Plan to be implemented at the site. Based on the site location, the need to leave characterization/construction equipment on site and the risk of unauthorized trespassers entering the site, ARCADIS proposes the use of a security service for the site. This would include a security service on site during weekday non-working hours (estimated to be approximately 12 hours per weekday), as well as during weekends (since it is currently anticipated that work activities will not be performed during weekends, the security service will be used during these non-working hours). In addition, fence maintenance shall also be performed as appropriate.
- A Sedimentation, Erosion, and Dust Control Plan to be used to limit the migration of contaminated material off of the property, including migration due to wind and stormwater.
- Procedures for the excavation and off-site disposal of all materials at an approved off-site disposal facility, in accordance with the USEPA's Off-Site Rule, 40 Code of Federal Regulations (CFR) § 300.440, with a PCB concentration of greater than or equal to 50 ppm in the East and South Crushed Concrete Piles and the West Pad, consistent with the disposal requirements in 40 CFR §761.61(a)(5)(i)(B) of the regulations implementing the Toxic Substances Control Act, 15 U.S.C. §§ 2601 et seq. In accordance with Paragraph 15.a. of the AOC, this work must be completed within 40 business days of completing the characterization activities of these areas.
- A schedule for implementing this FWP.

In addition, a *Health and Safety Plan* (HASP) has been prepared and will be submitted to the USEPA as a separate document. This HASP will be consistent with the USEPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992) and will comply with all currently applicable Occupational Safety and Health Administration regulations found in 29 CFR Part 1910. The HASP will be used to confirm the overall protection of public health and safety during the performance of on-site work required under the AOC.

#### **1.4 Special Considerations**

Laboratory analysis described in this FWP will be conducted by a Voluntary Action Program- (VAP-) certified analytical laboratory (as codified at OAC 3745-300-04), TestAmerica Laboratories, located in North Canton, Ohio. Note, certain tests, such

as analysis of concrete for PCBs, are not certified by the VAP. Soil testing for PCBs is, and will be done accordingly (i.e., VAP certifications will be obtained where it is applicable).

In order to minimize matrix effects due to the nature of concrete, ARCADIS will be using a 5-gram initial weight instead of the 30-gram initial weight, as recommended by the method for the 3500B extraction. The sample will be thoroughly homogenized previous to weighing, and the modification will elevate the reporting limit to 100 mg/kg for concrete matrix, as received.

Field quality assurance/quality control (QA/QC) measures shall be implemented in accordance with Paragraph 17 of the AOC, as described in Section 2.2 of this FWP.

### **1.5 Project Team**

The proposed project team is presented below. The team members were selected based on individual project experience related to the specific tasks required for this site. A brief description of each individual's project responsibilities is provided below:

- *Mr. Ronald R. Clark, P.E., Certified Professional* – Mr. Clark will serve as Project Coordinator and Certified Professional.
- *Mr. Tom Hite, Project Manager/Senior Geologist* – Mr. Hite will be the Field Manager for sampling and characterization. Mr. Hite will also be Mr. Clark's designated Alternate Project Coordinator for observation of field activities should such oversight be necessary when Mr. Clark is not available.
- *Ms. Cindy Capell, Geologist and Mr. Stuart Wells, Geologist* – Ms. Capell and Mr. Wells will be responsible for the on-site sampling and characterization activities.
- *Mr. Joseph Molina, P.E., Construction Manager* – Mr. Molina will be responsible for all construction-related activities at the site.
- *Mr. William B. Popham, Vice President* – Mr. Popham will serve as the overall project lead and provide oversight and coordination.

## **2. East and South Crushed Concrete Piles and West Pad Assessment**

### **2.1 Introduction**

The following outlines the sampling strategy and methods for the South Crushed Concrete Pile, the East Crushed Concrete Pile, and the West Pad to characterize these areas for off-site transportation and disposal. It is anticipated that the West Pad and East Crushed Concrete Pile will be characterized first, followed by the characterization of the South Crushed Concrete Pile.

#### **2.1.1 South Crushed Concrete Pile**

It is proposed that a seven-point composite sampling technique be used for this area and collecting these composite samples from 200- to 250-cubic yard piles. Based on the estimated quantity of 4,860 cubic yards, the South Crushed Concrete Pile will be windrowed and demarcated in 200- to 250-cubic yard increments, which will include approximately 20 increments; therefore, approximately 20 composite samples. At this time, the West Pad area and current South Crushed Concrete Pile areas are proposed as the areas for windrowing the South Crushed Concrete Pile material. The proposed areas outside the current pile footprint will be covered with a layer of polyethylene before the material is windrowed.

As referenced above, seven discrete samples will be collected for each 200- to 250-cubic yard increment (pile) and those seven samples will be composited by the laboratory and analyzed for PCBs. Based on the analytical results of each composite sample, the initial seven discrete samples may be analyzed individually in an effort to reduce the volume of material to be disposed off site.

Proposed windrow alignment for the South Crushed Concrete Pile is three, parallel north/south trending windrows on the current West Pad and one east/west trending windrow in the area of the current South Crushed Concrete Pile. We anticipate piles will be 8 to 12 feet wide at base and 5 to 6 feet high. Three samples will be collected from each side (6 total) plus one from the center of each 250-cubic yard allotment. By the time the material is windrowed, it should be adequately homogenized so samples will be collected via either hand methods (i.e., shovel or post hole digger) or excavator bucket (if needed) from the upper 1 foot of the pile.



Further, an additional composite sample will be collected from the South Crushed Concrete Pile and will be analyzed by the laboratory for additional disposal parameters required by the disposal facility.

#### 2.1.2 East Crushed Concrete Pile

Current USEPA data indicates that all material in the East Crushed Concrete Pile has PCB concentrations greater than 50 ppm. ARCADIS proposes to collect six additional discrete samples and analyze them independently for PCBs and a composite for waste characterization analysis for the waste disposal facility.

Confirmation samples from the underlying upper 3 inches of soil will be collected at eight locations depicted on Figure 3 following removal of the East Crushed Concrete Pile.

#### 2.1.3 Western Pad

Originally we proposed collecting 15 additional samples using the concrete pulverization procedure outlined below to confirm the previous analytical results of those samples with the highest PCB concentrations. An additional 10 samples were proposed to be collected after the confirmation sampling to refine the delineation of the pad.

As a result of discussions during a recent joint (USEPA and ARCADIS) site visit, no confirmation samples are proposed for the West Pad. However, 15 to 20 initial delineation samples will be collected with the objective to better define the area(s) exceeding 50 ppm PCBs.

The 50 ppm line shall be extended north to include the 10,000 ppm and 5,600 ppm PCB concentrations previously identified and as the USEPA has marked in the field. We have updated Figure 3 to show the approximate location of this line. We understand the actual line is as the USEPA has marked it in the field. West Pad sample locations are depicted on Figures.

Similar to the South and East Crushed Concrete Piles, an additional composite sample will be collected from the West Pad and may be analyzed by the laboratory for additional disposal parameters that may be required by the disposal facility.

For the West Pad, in areas where concrete pads require removal, samples of the underlying soil will be collected as follows: 0 to 3 inches below ground surface (bgs), 3 to 12 inches bgs, 12 to 24 inches bgs, 24 to 36 inches bgs, and 36 to 48 inches bgs. Initially, only the 0 to 3-inch bgs sample will be analyzed using a 24-hour turnaround time for analysis. If this sample exceeds 16 ppm or the USEPA-approved alternative cleanup concentration, ARCADIS will start analyzing the deeper samples in a progression of depth using a 24-hour turnaround time for analysis until the PCB concentration is less than 16 ppm or the USEPA-approved alternative cleanup concentration. Samples will be collected via direct-push technology at locations agreed upon by the USEPA and ARCADIS following receipt of the pad results.

## **2.2 Quality Assurance/Quality Control Measures**

All sampling and analyses performed pursuant to the AOC shall conform to the USEPA's direction, approval, and guidance regarding sampling, QA/QC, data validation, and chain of custody procedures. ARCADIS will provide under separate cover before sampling starts a Quality Management Plan, which includes an electronic copy of the laboratory's QA/QC Manual and ARCADIS field sampling Standard Operating Procedures (SOPs) for reference.

The laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate USEPA guidance. QA/QC practices shall follow, as appropriate, *Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures* (OSWER Directive No. 9360.4-01, April 1 1990), as guidance for QA/QC and sampling. Laboratory services will be provided by laboratories that have a documented Quality System that complies with American National Standards Institute (ANSI)/American Society for Quality Control E-4 1994, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI, 1995), and *EPA Requirements for Quality Management Plans (QA/R-2)* (EPA/240/B-01/002, March 2001) (USEPA, 2001), or equivalent documentation as determined by the USEPA. The USEPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program as meeting the Quality System requirements.

Upon request by the USEPA, the Respondent shall have such a laboratory analyze samples submitted by the USEPA for QA monitoring. The Respondent shall provide to the USEPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

Upon request by the USEPA, the Respondent shall allow the USEPA or its authorized representatives to take split and/or duplicate samples. The Respondent shall notify the USEPA not less than 3 business days in advance of any sample collection activity, unless shorter notice is agreed to by the USEPA. The USEPA shall have the right to take any additional samples that the USEPA deems necessary. Upon request, the USEPA shall allow the Respondent to take split or duplicate samples of any samples it takes as part of its oversight of Respondent's implementation of the work.

The USEPA will split all characterization and confirmation samples with ARCADIS and analyze approximately 10 to 20 percent of them. Any discrepancies in the results between the USEPA and ARCADIS analysis will default to whichever is the highest result.

For concrete pulverization samples, volume will be limited. Therefore, two concrete boreholes will be advanced at each sample location and the resulting concrete powder from those borings will be homogenized in the field then divided three ways. The first and second sample aliquots will be split between ARCADIS and the USEPA. Powder from the third aliquot from each sample location will be retained for additional waste characterization analysis.

### **2.3 Sample Designation**

South Crushed Concrete Pile samples will carry the designation ARC-SCCP-1,2,3,4 – and proceed in numerical order.

East Crushed Concrete Pile samples will carry the designation ARC-ECCP-1, 2, 3, 4 – and proceed in numerical order.

West Pad samples will carry the designation ARC-WP-1, 2, 3, 4 – and proceed in numerical order.

### **2.4 Sampling Equipment and Procedures**

#### **2.4.1 Crushed Concrete Samples**

Crushed concrete samples from the South and East Crushed Concrete Piles not collected by hand methods will be collected via a tracked excavator directly from the bucket of the excavator from an area that has not touched the inside of the bucket.

#### 2.4.2 West Pad Pulverization Samples

A paper template will be placed on the concrete surface at the sampling location and a 1-inch-diameter masonry bit attached to a hand held rotary percussion hammer will be used to core the concrete to a depth of 6 centimeters. The resulting powder from the pulverization will be collected from the paper and transferred to laboratory-supplied sampling jars for analysis. This method confirms that samples are representative of concrete (i.e., both the more porous cement and the less porous aggregate). This procedure has been used on previous USEPA Region 5 sites with success in providing representative PCB concentrations in concrete slabs.

### 2.5 Sample Handling – Chemical Analysis

#### 2.5.1 Sample Preservation

Samples collected for chemical analysis will be stored on ice in a cooler immediately after collection.

#### 2.5.2 Quality Assurance/Quality Control Samples

##### 2.5.2.1 Blanks

Since no volatile organic compounds are of concern, no trip blanks are planned; however, equipment blanks will be collected to verify that sampling equipment has not affected the integrity of the field samples.

To evaluate whether the sampling device has been effectively cleaned, equipment blanks will be prepared by rinsing the sampling device with laboratory-supplied water, transferring the water to bottles, and submitting the sample to the laboratory for analysis. The water will be collected in the properly preserved containers specified by the laboratory. The sample will be analyzed by the identical methods as the soil sample. An equipment blank will be collected for each analytical group to be analyzed on a given day.

The number of equipment blanks analyzed for a class of compounds will be equal to at least 10 percent of the total samples to be analyzed for those methods, with a minimum of 1 per day.

## **2.6 Chain of Custody**

The chain of custody will allow for the tracking of possession and handling of individual samples from the time of field collection through laboratory analysis. The chain of custody program will include sample labels, sample seals, field logbook, chain of custody form/sample analysis request sheet, and laboratory logbook. All chain of custody procedures will be performed in accordance with standards of the industry

All sample labels will contain the following information:

1. sample ID number
2. name of collector
3. date and time of collection
4. place of collection
5. parameters required for analysis

### **2.6.1 Sample Seal**

A seal will be placed on the sample container or on the shipping container to confirm that samples have not been disturbed during transportation.

### **2.6.2 Field Logbook**

An up-to-date field logbook will be kept by each sampling team to document daily events. The logbook will include a general list of tasks performed, additional data or observations not listed on field data sheets, and document communications with on-site personnel or visitors as it applies to the project.

### **2.6.3 Chain of Custody Record Sheet**

The chain of custody record will be maintained to trace sample possession and time of collection. The chain of custody will accompany each sample and record the:

1. sample number

2. signature of collectors
3. date and time of collection
4. sample type
5. sample location identification
6. number of containers
7. analytical parameters required
8. signature of relinquished and dates of possession by each party
9. preservatives

#### 2.6.4 Laboratory Logbook

The laboratory will maintain a record of the processing steps that are applied to each sample (i.e., sample preparation techniques, instrumental methods, experimental conditions, and QC results). The time, date, and name of person performing each processing will also be recorded.

### 2.7 Classification and Field Descriptions

Samples will be classified in the field consistent with ARCADIS SOPs. In addition, all pertinent observations noted during sample collection will be noted on logs or in field notes

### 2.8 Decontamination of Equipment

#### 2.8.1 Tracked Excavator Bucket

All soil sampling equipment, such as the tracked excavator bucket will be decontaminated prior to arrival on site. Dry decontamination methods shall be employed between sample locations (i.e., confirming that samples are collected from material that has not touched the bucket of the excavator).

#### 2.8.2 Masonry Bits and Hand Sampling Equipment

Masonry bits and non-dedicated hand sampling equipment will be scrubbed in Liquinox/potable water bath and rinsed with distilled water and hexane.

All rinsates will be placed in Department of Transportation- (DOT-) approved 55-gallon steel drums for subsequent characterization and off-site disposal.

#### **2.9 Disposal of Cuttings, Unused Soil Samples, Personal Protective Equipment**

Minimal cuttings and personal protective equipment (PPE) should be generated during characterization activities; however, materials generated will be properly stored and secured in DOT-approved 55-gallon drums, or equivalent approved containers, and labeled for characterization and off-site disposal.

### **3. East and South Crushed Concrete Piles and West Pad Removal, and Off-Site Disposal**

#### **3.1 Stormwater/Sedimentation/Erosion/Dust Control Plan**

##### **3.1.1 Temporary Sedimentation and Erosion Control Measures**

Temporary sedimentation and erosion control measures for concrete/soil removal areas will be installed along the perimeter of the work areas, as necessary. The control measures for the excavation will consist of hay bales and/or silt fence. In addition, storm sewer manholes within the work area that could receive stormwater runoff from the work area will be wrapped with filter fabric to prevent any solids from entering the storm sewer.

These temporary control measures will be installed and maintained for the duration of the project. Daily inspections of these control measures will be conducted and maintenance completed, as necessary. Any excessive soil accumulation along the control measures will be removed and managed accordingly. Prior to demobilization from the site, the temporary sedimentation and erosion control measures will be removed and properly disposed off site.

##### **3.1.2 Air Monitoring**

Air monitoring will be performed during all ground intrusive activities in accordance with the requirements included in the HASP. The air monitoring activities will be implemented to verify that site workers and the surrounding community are not adversely impacted by the concrete/soil removal activities. As indicated in the HASP, the air monitoring activities will be performed to address particulate exposure and action levels that have been established for the site to determine the appropriate PPE to be used by site personnel, and whether or not control measures for dust emissions are necessary.

The air monitoring activities will be accomplished by using two particulate meters (or equal), with one meter positioned immediately downwind of the work zone and the other meter positioned downwind of the perimeter of the site. The particulate meter will be positioned such that the sample inlet will be located at a height approximating the breathing zone. The particulate meters will be calibrated in accordance with the manufacturer's instructions and will provide a continuous readable particulate dust concentration, with the results being recorded in a data logger.



The locations of the two particulate meters will be established each day, prior to commencing site activities, and depending on the predominant wind direction at the start of the day's activities. If wind direction shifts radically during the workday, the particulate meters will be relocated so that the downwind impacts are maintained. Any changes will be documented in a field logbook.

Normal operating conditions for fugitive dust control are dictated by ambient air monitoring results. Action levels applicable to this project are included in the HASP. If an exceedance to the air monitoring action levels occurs, the first step will be to identify the potential sources (e.g., excavation face, vehicular traffic) that represent the primary contributing factor to the exceedance. This identification step will be completed as quickly as possible, primarily by visual inspection of those potential sources that appear to be generating the most dust or appear to be the most heavily impacted.

### 3.1.3 Dust Control Plan

Upon identifying specific contributing sources, dust control measures (i.e., water spray from an on-site water truck) will be available at the site and used when necessary. After implementing dust control measures, the perimeter air monitoring results will be evaluated to determine the effectiveness of the additional controls. If two successive readings indicate that the site is still not within the required action levels, additional control measures will be implemented as needed.

Temporary shutdown of all or part of the site operations will be initiated when the use of dust control measures do not lower perimeter airborne particulate concentrations to below the established action levels. Such a condition could be associated with unstable weather conditions (e.g., high winds). If operations or a portion of operations are shutdown temporarily, potential particulate emissions associated with wind erosion will be addressed through additional application of water spray or covering with polyethylene in the specific areas of concern.

## 3.2 Security Measures

In accordance with Paragraph 14.2 in the AOC, site security will be implemented once equipment has been mobilized to the site. Generally, site security will be managed by ARCADIS personnel during daily site activities (approximately 12 hours per day). Site security for the remaining 12 off-hours, as well as 24-hour coverage on off-days (i.e., Holidays and weekends), will be provided by a local security company. Overall, these

site security measures will provide for 24/7 coverage. As such, fence repair will be performed only when required.

### **3.3 Waste Material Loading and Off-Site Transportation and Disposal**

Upon final approval of this FWP, ARCADIS will mobilize on site to implement the removal action for all materials containing PCB concentrations above 50 ppm. In accordance with Paragraph 15.a. of the AOC, this work effort will need to be completed within 40 business days after characterization. The work activities associated with this phase of work includes:

- Concrete materials from the South Crushed Concrete Pile 1 having PCB concentrations greater than 50 ppm will be loaded into transport vehicles for off-site disposal.
- All concrete materials from the East Crushed Concrete Pile 2 having shown to have PCB concentrations greater than 50 ppm will be loaded into transport vehicles for off-site disposal.
- Breaking up and removing the West Pad, and properly sizing (to be determined) of the concrete slab for off-site disposal of the concrete materials having PCB concentrations greater than 50 ppm.

#### **3.3.1 Material Loading**

It is anticipated that a tracked excavator will be used to excavate soil, and dump trucks/trailers will be used to transport excavated soils to the off-site disposal facility. The excavation equipment used will be appropriately sized to meet the maximum anticipated excavation work effort, and will serve as a dedicated piece of equipment that will remain within the confines of the site to the extent practicable. Also, dump trucks/trailers will be positioned on clean surfaces, to the extent practicable, or undisturbed surface soil, to minimize decontamination efforts.

#### **3.3.2 Material Transportation**

Hazardous substances/hazardous waste will be transported and disposed at a USEPA-approved disposal facility in accordance with the USEPA's Off-Site Rule, 40 CFR§ 300,440. Once the appropriate approvals have been received from the off-site disposal facilities, transport vehicles will be scheduled for each waste classification. As

indicated previously, it is anticipated that the excavated/removed materials will be direct-loaded into transport vehicles for off-site disposal. After each transport vehicle is loaded, a canvas tarpaulin will be placed over the top of the soil container and secured, and the wheels and undercarriage of the transport vehicle will be observed for accumulated soil and, if necessary, subsequently decontaminated. As appropriate, a truck tire decontamination area will be established at the exit point for truck traffic leaving the site.

Prior to exiting the site, either a hazardous waste manifest or nonhazardous bill of lading form will be filled out and signed appropriately (each form will require a signature from the truck driver and a Standex representative or agent) for each transport vehicle, the appropriate placards/labels will be affixed, and vehicles will be checked for hauling permits, as necessary.

### 3.3.3 Material Disposal

Before shipping any regulated hazardous substances, pollutants, or contaminants from the site to an off-site location, the USEPA's certification will be obtained, certifying that the proposed receiving facility is operating in compliance with the requirements of Comprehensive Environmental Response, Compensation, and Liability Act Section 121(d)(3), 42 U.S.C. § 9621 (d)(3), and 40 CFR § 300.440. Standex will only transport regulated hazardous substances, pollutants, or contaminants from the site to an off-site disposal facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

Prior to any off-site shipment of regulated waste material from the site to an out-of-state waste management facility, Standex will provide written notification of such shipment of the regulated waste material to the appropriate state environmental official in the receiving facility's state and to the On-Scene Coordinator.

The written notification will include the following information:

1. the name and location of the facility to which the regulated waste material is to be shipped
2. the type and quantity of the regulated waste material to be shipped
3. the expected schedule for the shipment of the regulated waste material

4. the method of transportation

The state in which the planned receiving facility is located will be notified in the event of major changes in the shipment plan, such as decision to ship the regulated waste material to another facility within the same state, or to a facility in another state.

The identity of the receiving facility and state will be determined following the characterization process referenced above. Therefore, information required by Paragraph 21.a. and 21.b. of the AOC, as referenced above, will be provided as soon as practicable after the characterization process has been completed and before the regulated waste material is transported off-site for disposal.

#### **4. Schedule**

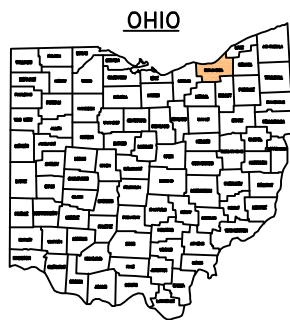
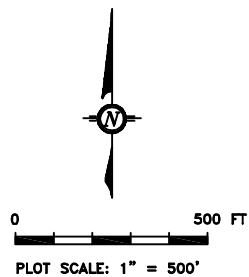
Characterization activities associated with the South and East Crushed Concrete Piles and the West Pad will be initiated in approximately 1 week of the USEPA's written approval of this FWP. At this time, the characterization activities referenced in this FWP should be completed in approximately 2 weeks or 10 working days. Once characterization activities have been completed, in accordance with Paragraph 15.a. of the AOC, within 40 business days, all PCB materials (South and East Crushed Concrete Piles and West Pad) with a concentration of greater than 50 ppm will be transported off site for disposal. However, in an effort to expedite this process, it is anticipated that the removal and off-site disposal of these materials will actually begin during the characterization process, once the applicable data becomes available.

## Figures



CITY: (DUBLIN) DIV: (GROUP) (SER2) DB: (R. SMITH) LD: (Opt) PIC: (Opt) PM: (T. HITE) TM: (T. HITE) LVR: (Opt) ON: "OFF" REF: "G:\DRAWINGS\Standex International\trinity superfund site\CL00008-00.dwg" LAYOUT: SITE LOCATION SAVED: 6/17/2008 1:26 PM ACADVER: 17.05 (LMS TECH) PAGES: 17.05 (LMS TECH) PLOT: 6/19/2008 11:42 AM BY: SMITH, BOB

XREFS: IMAGES: PROJECTNAME: "CL00008-00.dwg" 2007-03-28\_Site.jpg 2007-03-28\_Site.jpg



- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
- NOTES:**
1. AERIAL DATED MARCH 29, 2007.
  2. PROPERTY BOUNDARY ESTIMATED FROM DRAWINGS PROVIDED BY OTHERS.

STANDEX INTERNATIONAL  
9203 DETROIT AVENUE, CLEVELAND, OHIO

## SITE LOCATION MAP



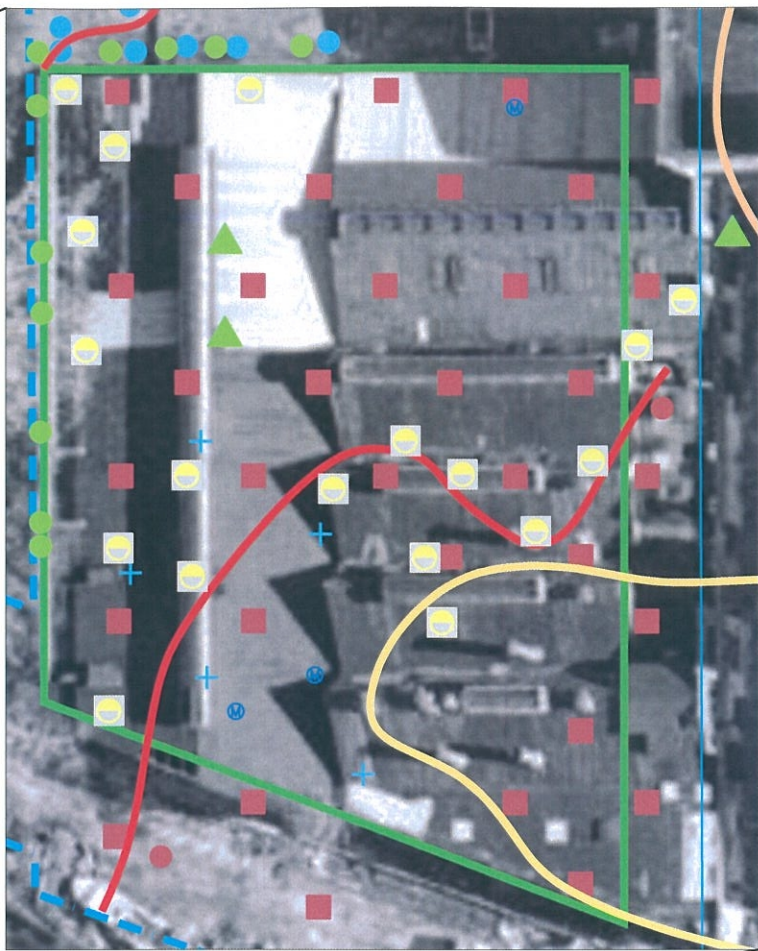
FIGURE  
**1**



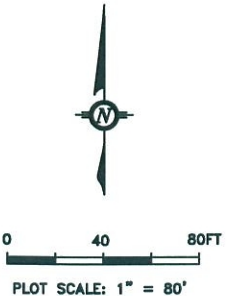




CITY: (DUBLIN) DIV: (GROUP: (SER2) DB: (R SMITH) LD: (Cdr) PIC: (Cdr) PM: (T HITE) LYR: (O) (ON) \*OFF: (REF) XREFS: G:\DRAWINGS\Standex International\trinity superfund site\CL00008-01.dwg LAYOUT: FIRST WORKPLAN FIG 3 SAVED: 7/9/2008 12:20 PM ACADVER: 17.05 (LMS TECH) PAGES: 17.05 (LMS TECH) PLOTSETUP: --- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 7/9/2008 12:20 PM BY: SMITH, BOB



- LEGEND
- PROPERTY BOUNDARY (APPROXIMATE)
  - CRUSHED DEMOLITION DEBRIS
  - UNCRUNSHED DEMOLITION DEBRIS
  - EAST CONCRETE PILE POST REMOVAL CONFIRMATION SAMPLE
  - PROPOSED WEST PAD SAMPLE
  - MONITORING WELL LOCATION (WESTON)
  - PHASE I CONCRETE SAMPLING LOCATION
  - PHASE I SOIL SAMPLING LOCATION
  - PHASE II SOIL SAMPLING LOCATION
  - PHASE II SOIL/CONCRETE SAMPLING LOCATION
  - OR PHASE III SOIL SAMPLING LOCATION
  - H<sub>2</sub>W SAMPLING LOCATION
  - A1248 MAX DETECT CONTOURS
    - 16 mg/kg
    - 50 mg/kg
- NOTE: SOIL SAMPLES COLLECTED FROM LOCATIONS 01 THROUGH 20 WERE PREFIXED BY WSC-09-07-01



PIT 1 - SOUTHEAST CRUSHED CONCRETE PIT

NOTE:  
1. PROPERTY BOUNDARY ESTIMATED FROM DRAWINGS PROVIDED BY OTHERS.

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WEST PAD AND EAST PILE SAMPLE LOCATIONS

ARCADIS

FIGURE  
3